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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,033	08/21/2007	Kyle Jiang	22128-71925	1674

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EXAMINER

CHEA, THORL

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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09/30/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/582,033	Applicant(s) JIANG ET AL.	
	Examiner Thorl Chea	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9,10,15-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9,10,15-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to the communication on July 16, 2010; claims 1, 9-10, 15-17, 19-24 are pending and considered in this office action; claims 2-8, 11-14 has been canceled.

2. The rejection with respect to claim 17 in view of Conradie E.H. or Warren (US 2002/0115016) is withdrawn in view of the claiming of the thickness greater than 0.7 mm, while Warren discloses the thickness of epoxy layer of 0.7 mm. The rejection may be reinstated if the claim amended to include the limitation of 0.7 mm.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 9-17, 20-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly amended languages to claims 1, 9-17, 20-24 raises the issues of new matter. see for instance the language "producing one or more microstructure", "the SU-8 photoresist has a thickness greater than 0.7 mm, "light comprises a combination of wavelengths including 436 nm, 405nm; "about 80 %" of light at 365 nm, and "about 90 %" of light at 365 nm in claim 1; "the thickness of the photoresist is in the range of 0.701 to 1.5 nm" in claim 10; ""subsequently to a second temperature that is higher than the first temperature", the term

Art Unit: 1795

"about" in claims 20-23; and the term "high pressure mercury lamp" in claim 24. All these newly added terms are not found in the specification disclosure as originally filed and raise the issue of new matter. There is nowhere in the specification that disclose the use of the claimed process to produce more than one microstructure; the specification disclosure on page 9 under "exposure" discloses "UV light from USHIO 250 W super high pressure mercury lamp providing a combination of useable wavelength including g-line (436 nm), h-line (405 nm) and i-line (365 nm). The scopes of the light used in the present claimed invention extend beyond the light produced by device presented in the specification as filed. Page 9, second paragraph discloses first temperature from 60 °C to 70 °C and a second temperature from 90 °C to 100 °C, while the scope of the temperature in claim 15 is outside the range of the original disclosure. The specification disclosure on page 4, 5th paragraph discloses "more preferably the photoresist is 0.7 to 1.5 mm thick" not 0.701 to 1.5 mm presented in claim 10 or greater than 0.7 mm presented in claim 1. The use of the term "about" in claim 1 and claims 20-24 modified the range of percentage and the amount of energy presented in the specification as originally filed.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 9-17, 20-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of the term "about" is unclear or indefinite since the mete and bound of the percentage of light and the amount thereof cannot ascertain form the specification disclosure. The claiming of "exposing the SU-8 photoresist to the light with a first filter that filters about 80 % of the light at 365 nm" in (b) is unclear whether this processing

Art Unit: 1795

means that 80 % of the light at 365 nm is not transmitting through the filter or 80 % of the light at 365 nm transmits through the filter. See also similar languages in step (c) to (d). The term “filter” means: to remove by mean of a filter to pass or move through or as if move through a filter. See English Dictionary such as Webster’s Ninth New Collegiate Dictionary. Thus, it is unclear whether 80 % of the light at 365 nm move through the filter or 80 % of the light at 365 nm is not pass through a filter but 436 nm and/or 405 nm. If the light at 365 nm is not passed through the filter, the term “filter out” should be used.

7. The paragraph 12 of the rejection on March 16, 2010 is withdrawn in view of the amendment and the applicants' remark on July 16, 2010. The applied prior art of record at least do not discloses the thickness of greater than 0.7 mm, the amount of energy and partially exposure steps presented in steps (a) to (d).

8. Cited of interest: Nagai et al (US 2004/0091820) which discloses an ultra high-pressure mercury lamp has a spectral light of g-line (436 nm), an h-line (405 nm) or an i-line (365 nm) which satisfies the wavelength region whereupon spectral light of these rays can be utilized either each individually or in combination thereof. An optical filter is used in association with the ultra high-pressure mercury lamp in order to transmit a g-line (436 nm), an h-line (405 nm), or an i-line (365 nm) of the ultra high-pressure mercury lamp as in combination or singly accordingly to the intended used. The optical filter includes an absorption filter and a thin-film filter, whereupon these filter are appropriate laminated to allow a desired wavelength region to be spectrally transmitted. However, Nagai et al does not disclose the steps of partially filter out the light of 365 nm recited in step (a) to (d) claimed in the present claimed invention.

Conclusion

Art Unit: 1795

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

Art Unit: 1795

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TC/
September 23, 2010

/Thorl Chea/
Primary Examiner, Art Unit 1795